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PATENT APPLICATION

ATTORNEY DOCKET NO. 200313512-1

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael T. Roeder

Confirmation No.: 4552

Application No.: 10/633,440

Examiner: YUEN, Kan

Filing Date: August 1, 2003

Group Art Unit: 2416

Title: User Configurable Functions for Adjusting Service Differentiation Meters

Mail Stop Appeal Brief-Patents  
Commissioner For Patents  
PO Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on June 12, 2009.

☐ The fee for filing this Appeal Brief is \$540.00 (37 CFR 41.20).

☒ No Additional Fee Required.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

☐ 1st Month  
\$130

☐ 2nd Month  
\$490

☐ 3rd Month  
\$1110

☐ 4th Month  
\$1730

☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$ 00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

Respectfully submitted,

Michael T. Roeder

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**APPEAL BRIEF**

Mail Stop Appeal Brief - Patents  
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Sir:

In response to Appellant's filing of an Appeal Brief on December 4, 2008, the Examiner of this application reopened prosecution with a non-final Office Action dated March 12, 2009 (the "Office Action" or the "Action"). Having reviewed the new grounds of rejection raised in the Office Action of March 12, 2009, Appellant hereby requests re-instatement of the appeal in this application and files the present, updated Appeal Brief, along with a new Notice of Appeal, in support of the re-instated appeal.

**I. Real Party in Interest**

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

## **II. Related Appeals and Interferences**

There are no appeals or interferences related to the present application of which the Appellant is aware.

### **III. Status of Claims**

Claims 2, 7, 8, 17, and 20 have been previously cancelled without prejudice or disclaimer.

Claims 1, 3-6, 9-16, 18, 19, and 21-26 are pending in the application and stand finally rejected.

Accordingly, Appellant appeals from the final rejection of claims 1, 3-6, 9-16, 18, 19, and 21-26, which claims are presented in the Appendix.

#### **IV. Status of Amendments**

Appellant has filed a single after-final amendment concurrent with this Brief. Appellant cannot indicate the status of this amendment as of this writing as entry of the amendment has not yet been determined. However, the amendment presented is to correct minor informalities and has not bearing on the substantive issues of this appeal

### **V. Summary of Claimed Subject Matter**

The claimed subject matter discloses methods, apparatus, and systems of assigning service priorities to traffic from a plurality of sources using meters (*Appellant's specification, p. 3, lines 1-32*). In these methods, apparatus, and systems, a packet is received (202) that is placed into a specific class of service (COS) group pertaining to a specific service being tracked and controlled (*Appellant's specification, p. 3, lines 11-13; p. 5, lines 1-3*). A fabric-adjusted meter modifier (410, 508) is determined (302) depending on a payload size (408) of the packet and on technology of a limiting uplink (106-A to 106-C) being used (*Appellant's specification, p. 3, lines 13-17; p. 5, lines 4-23; p. 6, line 7 to p. 7, line 24*). The fabric-adjusted meter modifier (410, 508) is then added (304) to a meter corresponding to the specific COS group, such that the meter comprises a counter that tracks traffic associated with the service over a period of time and the adding updates the meter (*Appellant's specification, p. 3, lines 23-24; p. 5, line 24 to p. 6, line 6*).

The fabric-adjusted meter modifier (410, 508) is generated by a user specified function tailored to the specific technology or fabric of an uplink (106-A to 106-C) being used. (*Appellant's specification, p. 5, lines 5-8*). The addition of the fabric-adjusted meter modifier (410, 508) to the meter corresponding to the COS group results in an updated meter value that is a more accurate reflection of the actual bandwidth resources used in forwarding packets for the COS group. (*Appellant's specification, p. 5, lines 25-29; p. 7, line 25 to p. 8, line 29*). The increased accuracy is due to the meter modifier accounting more accurately for the overhead associated with the technology of the limiting link fabric. (*Id.*).

Turning to Appellant's specific claims,

Claim 1 recites:

A method of assigning service priorities to traffic from a plurality of sources using meters (*Appellant's specification, p. 3, lines 1-32*), the method comprising:

receiving (202) a packet that is placed into a specific class of service (COS) group pertaining to a specific service being tracked and controlled (*Appellant's specification, p. 3, lines 11-13; p. 5, lines 1-3*);

determining (302) a fabric-adjusted meter modifier (410, 508) depending on a payload size (408) of the packet and on technology of a limiting uplink (106-A to 106-C) being used (*Appellant's specification, p. 3, lines 13-17; p. 5, lines 4-23; p. 6, line 7 to p. 7, line 24*); and

adding (304) the fabric-adjusted meter modifier (410, 508) to a meter corresponding to the specific COS group, wherein the meter comprises a counter that tracks traffic associated with said service over a period of time, and wherein said adding updates the meter (*Appellant's specification, p. 3, lines 23-24; p. 5, line 24 to p. 6, line 6*).

Claim 9 recites:

An apparatus for forwarding traffic from a plurality of sources, the apparatus comprising (*Appellant's specification, p. 3, lines 1-32*):

a port for receiving (202) a packet that is placed into a specific COS group pertaining to a specific service being tracked and controlled (*Appellant's specification, p. 3, lines 11-13; p. 5, lines 1-3*);

calculation circuitry configured to determine (302) a fabric-adjusted meter modifier (410, 508) depending on a payload size (408) of the packet and on a technology of an uplink (106-A to 106-C) being used;



update circuitry configured to add (304) the fabric-adjusted meter modifier (410, 508) to a meter corresponding to the specific COS group, wherein said meter comprises a counter that tracks traffic associated with said service over a period of time (*Appellant's specification, p. 3, lines 23-24; p. 5, line 24 to p. 6, line 6*).

Claim 15 recites:

A system for routing traffic from a plurality of sources using class of service (COS) meters (*Appellant's specification, p. 3, lines 1-32*), the system comprising:

means for receiving (202) a packet that is placed into a specific COS group pertaining to a specific service being tracked and controlled (*Appellant's specification, p. 3, lines 11-13; p. 5, lines 1-3*);

means for determining (302) a fabric-adjusted meter modifier (410, 508) depending on a payload size (408) of the packet and on a technology of an uplink (106-A to 106-C) being used (*Appellant's specification, p. 3, lines 13-17; p. 5, lines 4-23; p. 6, line 7 to p. 7, line 24*);

means for adding (304) the fabric-adjusted meter modifier (410, 508) to a COS meter corresponding to the specific COS group, wherein said meter comprises a counter that tracks traffic associated with said service over a period of time, and wherein said adding updates said meter (*Appellant's specification, p. 3, lines 23-24; p. 5, line 24 to p. 6, line 6*).

Claim 16 recites:

A method of implementing class of service (COS) functionality in a telecommunications system (*Appellant's specification, p. 8, line 30 to p. 9, line 11*), the method comprising:

defining (802) a user-configurable function by way of a user interface (*Appellant's specification, p. 8, lines 32-33*); and

assigning (804) the user-configurable function to be a meter modifier function associated with a class of service group in the system, wherein the meter modifier function depends on a payload size of a packet and is used to adjust for a fabric uplink technology (*Appellant's specification, p. 8, line 33 to p. 9, line 11*),

adding the meter modifier function to a group meter, wherein said adding updates the group meter (*Appellant's specification, p. 8, line 33 to p. 9, line 11*).

Claim 21 recites:

A method of implementing class of service (COS) functionality in a telecommunications system (*Appellant's specification, p. 8, line 30 to p. 9, line 11*), the method comprising:

defining (802) multiple user-configurable meter modifier functions by way of a user interface, said meter modifier functions to be added to meters to update said meters (*Appellant's specification, p. 8, lines 32-33*); and

assigning (804) each service class of a set of service classes to one of the user-configurable meter modifier functions (*Appellant's specification, p. 8, line 33 to p. 9, line 11*), wherein the meter modifier functions are dependent upon packet payload size and which type of fabric-uplink technology is used (*Appellant's specification, p. 3, lines 13-17; p. 5, lines 4-23; p. 6, line 7 to p. 7, line 24*).

## **VI. Grounds of Rejection to be Reviewed on Appeal**

The Office Action raised the following grounds of rejection.

- (1) Claims 1, 9, 15, 16, and 21 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.
- (2) Claims 1, 3-5, 9-12, 15, 16, 21, and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of U.S. Patent Publication No. 2005/0243745 to Stanwood et al. (“Stanwood”).
- (3) Claims 6 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Stanwood, and further in view of U.S. Patent Publication No. 2002/0049852 to Lee et al. (“Lee”).
- (4) Claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Stanwood, and further in view of U.S. Patent No. 6,874,096 to Norrell et al. (“Norrell”).
- (5) Claim 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Stanwood, and further in view of U.S. Patent Publication No. 2005/0105469 to Hao (“Hao”).
- (6) Claim 19 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Stanwood, and further in view of U.S. Patent Publication No. 2005/0163141 to Katayama (“Katayama”).
- (7) Claims 22-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Stanwood and further in view of U.S. Patent No. 7,292,534 to Valvo et al. (“Valvo”).

According, Appellant hereby requests review of each of these grounds of rejection in the present appeal.

## **VII. Argument**

(1) Claims 1, 9, 15, 16, and 21 comply with 35 U.S.C. § 112, second paragraph:

The Office Action rejects claims 1, 9, 15, 16, and 21 as being indefinite under 35 U.S.C. § 112, second paragraph. Appellant respectfully disagrees. Claim 1 recites:

A method of assigning service priorities to traffic from a plurality of sources using meters, the method comprising:  
receiving a packet that is placed into a specific class of service (COS) group pertaining to a specific service being tracked and controlled;  
determining a fabric-adjusted meter modifier depending on a payload size of the packet and on technology of a limiting uplink being used; and  
adding the fabric-adjusted meter modifier to a meter corresponding to the specific COS group, wherein the meter comprises a counter that tracks traffic associated with said service over a period of time, and wherein said adding updates the meter.

According to the Office Action, the term “technology,” as recited in claims 1, 9, 15, 16, and 21 with reference to a limiting uplink, “is considered vague and indefinite” because “[t]he examiner does not know whether the term ‘technology’ is referring to the parameter of the uplink or the connection type of the uplink or scheduling of the uplink.” (Action, p. 3).

Appellant respectfully disagrees. The essential inquiry regarding definiteness under Section 112 is not whether the Examiner can distinguish among multiple narrow terms that fall under the scope of a more broad term in the claims. Rather, the “essential inquiry” regarding definiteness is “whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity.” M.P.E.P. § 2173.02.

Appellant’s specification states the following:

The fabric-adjusted meter modifier is generated by a user specified function that may be tailored to the specific technology or fabric of an uplink being used. . . . For example, *the specific link fabric used may comprise tagged or untagged hardware-based routing to an Ethernet link*. In another example, *the specific link technology used may comprise hardware-based routing to a Synchronous Optical Network (SONET) link*. In another example, *the specific link technology may comprise a form*

*of software-based routing. Other specific link technologies may be used in other examples.*

(Appellant's specification, p. 5, lines 5-14; *see also* claims 22-24) (emphasis added).

In light of the above description and claims 22-24, Appellant notes that the meaning of the term "technology" in claims 1, 9, 15, and 16 has been made quite clear in Appellant's specification. Specifically, the "technology" of an uplink being used refers at least to its method(s) of routing packets to their destinations. As such, claims 1, 9, 15, 16, and 21 "set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity" and conform to the requirements of 35 U.S.C. § 112, second paragraph.

M.P.E.P. § 2173.02.

Appellant further notes that during examination, claims 1, 9, 15, 16, and 21 must be "given their broadest reasonable interpretation consistent with the specification." M.P.E.P. § 2111; *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005). Thus, even if the Examiner were correct in asserting that the term "technology" in this context could alternatively refer to a parameter of an uplink, the connection type of the uplink, or the scheduling of the uplink, Appellant is not obligated to confine the recitation of "technology" to one of these proposed meanings, since the "[b]readth of a claim is not to be equated with indefiniteness." *In re Miller*, 441 F.2d 689, 169 USPQ 597 (CCPA 1971).

Consequently, the Office Action has failed to indicate any indefiniteness in claims 1, 9, 15, 16, and 21 under § 112, second paragraph. For at least these reasons, the rejection of claims 1, 9, 15, 16, and 21 should not be sustained.

(2) Claims 1, 3-5, 9-12, 15, 16, 21, and 25 are patentable over the admitted prior art and Stanwood:

Claim 1:

Claim 1 recites:

A method of assigning service priorities to traffic from a plurality of sources using meters, the method comprising:

receiving a packet that is placed into a specific class of service (COS) group pertaining to a specific service being tracked and controlled;

*determining a fabric-adjusted meter modifier depending on a payload size of the packet and on technology of a limiting uplink being used;* and

adding the *fabric-adjusted* meter modifier to a meter corresponding to the specific COS group, wherein the meter comprises a counter that tracks traffic associated with said service over a period of time, and wherein said adding updates the meter.

(Emphasis added).

In making this rejection, the Office Action classifies a description in Appellant's specification of a "conventional method of using [sic] assigning service priorities to packets" as admitted prior art. This description recites, in its entirety:

FIG. 2 is a flow chart depicting a conventional method of using assigning service priorities to packets. A packet is received and attributed **202** by the router to a specific COS group. The specific COS group may be labeled "Ci" and pertains to a specific service being tracked and controlled. For example, the service may relate to traffic from a particular customer via a specific uplink.

In order to track the service, a meter configured for that purpose will be utilized. The meter may comprise a counter that tracks the traffic associated with the service over a particular period of time. When a packet attributed to group Ci is received, a meter modifier based on a payload size of the packet is added **204** to the corresponding meter. This updates the meter.

Once the meter is updated to reflect the recently received packet, the meter is used to determine how and if to forward the packet. The meter may be compared **206** against a so-called "black" limit. A black limit corresponds to a maximum utilization beyond which packets are to be dropped **208**. The meter may also be compared **210** against a so-called "red" limit. A red limit corresponds to a utilization level beyond which the priority level of a packet is reduced **212** before the packet is forwarded **214**. (Appellant's specification, p. 4, lines 9-26; *see also* Fig. 2).

The Office Action asserts that the above admitted prior art teaches "determining a fabric-adjusted meter modifier depending on a payload size of the packet and on technology of a limiting uplink being used." (Action, p. 5) (citing to Appellant's specification, p. 4, lines 18-20).

Appellant respectfully disagrees, noting that this portion of Appellant's specification merely discloses that "[w]hen a packet attributed to group Ci is received, a meter modifier based on a payload size of the packet is added 204 to the corresponding meter." (Appellant's specification, p. 4, lines 18-20). Nowhere does the admitted prior art teach or suggest anything regarding the determination of a meter modifier to be used with the packet. (Claim 1). Moreover, the admitted prior art does not teach or suggest anywhere that such a meter modifier is "fabric-adjusted" or "depending . . . on technology of a limiting uplink being used." (*Id.*). Accordingly, the admitted prior art utterly fails to teach or suggest "determining a fabric-adjusted meter modifier depending on a payload size of the packet and on technology of a limiting uplink being used" or "adding the fabric-adjusted meter modifier to a meter corresponding to the specific COS group." (Claim 1).

Furthermore, Stanwood fails to remedy the deficiencies of the admitted prior art to teach or suggest the subject matter of claim 1. The Office Action asserts that Stanwood also "disclosed the feature of determining a fabric-adjusted meter modified [sic] depending on technology [sic] of a limiting uplink being used." (Action, p. 5) (citing to Stanwood, ¶¶ 0071-76). Appellant strongly disagrees. Stanwood teaches a two-phase technique to monitor and control uplink/downlink bandwidths. (Stanwood, ¶ 0074). In an initialization phase of the Stanwood technique, each base station and cluster controller in a system is "provided with an initial set of bandwidth parameters." (*Id.*). In a tracking phase of the Stanwood technique, "the system monitors and thereby learns about the actual bandwidth requirements of the system" and "adapts to the bandwidth needs by updating the initial bandwidth parameters with the actual parameters." (*Id.*).

According to the Action, the tracking phase of the Stanwood system teaches determining the fabric-adjusted meter modifiers as recited in claim 1. (Action, p. 5). In

response, Appellant notes that Stanwood does not teach or suggest anything regarding packet metering. Rather, Stanwood is directed exclusively to adapting uplink/downlink bandwidths to “actual bandwidth requirements of the system.” (Stanwood, ¶ 0074). As will be readily apparent to anyone of ordinary skill in the art, the adaptation of bandwidth is not synonymous or analogous to packet metering as recited in claim 1. The adaptation of bandwidth taught by Stanwood is an actual change in the amount of data being transmitted from or to a system. In contrast, the packet metering recited in claim 1 is simply a technique to measure and filter data traffic. Thus, a change in bandwidth as taught in Stanwood would not necessarily change the metering of packets (i.e., how traffic is measured). Conversely, a change in the metering of packets would not necessarily affect the bandwidth transmitted to or from a system, only how the system treats packets that it receives.

Without teaching or suggesting packet metering, Stanwood simply *cannot* teach or suggest meter modifiers as recited in claim 1. However, even if Stanwood did teach meter modifiers, Stanwood still fails to teach or suggest meter modifiers that are “fabric-adjusted” or “modified depending on technology of a limiting uplink being used.” (Claim 1).

Under the analysis required by *Graham v. John Deere*, 383 U.S. 1 (1966) to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. The Supreme Court has recently reaffirmed that the *Graham* factors “continue to define the inquiry that controls” obviousness rejections under § 103. *KSR Int’l v. Teleflex Inc.*, 550 U.S. \_\_\_\_ (2007). In the present case, the scope and content of the prior art, as evidenced by the “admitted prior art” and Stanwood, did not include the claimed subject matter, particularly “determining a fabric-adjusted meter modifier depending on a payload size of the packet and on technology of a limiting uplink being used”



and “adding the *fabric-adjusted* meter modifier to a meter corresponding to the specific COS group.” (Claim 1).

The differences between the cited prior art and the claimed subject matter are significant because the addition of the fabric-adjusted meter modifier to the meter corresponding to the COS group results in an updated meter value that is a more accurate reflection of the actual bandwidth resources used in forwarding packets for the COS group. (*Appellant’s specification*, p. 5, lines 25-29; p. 7, line 25 to p. 8, line 29). The increased accuracy is due to the meter modifier accounting more accurately for the overhead associated with the technology of the limiting link fabric. (*Id.*). Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 1 under 35 U.S.C. § 103 and *Graham*. For at least these reasons, the rejection of claim 1 and its dependent claims should not be sustained.

Claim 9:

Claim 9 recites:

An apparatus for forwarding traffic from a plurality of sources, the apparatus comprising:  
a port for receiving a packet that is placed into a specific COS group pertaining to a specific service being tracked and controlled;  
calculation circuitry configured to *determine a fabric-adjusted meter modifier depending on a payload size of the packet and on a technology of an uplink being used*;  
update circuitry configured to add *the fabric-adjusted meter modifier to a meter corresponding to the specific COS group*, wherein said meter comprises a counter that tracks traffic associated with said service over a period of time.

(Emphasis added).

In contrast, the prior art of record fails to teach or suggest the apparatus of claim 9. Specifically, as amply demonstrated above, the admitted prior art and Stanwood fail to teach

or suggest “calculation circuitry configured to determine a fabric-adjusted meter modifier depending on a payload size of the packet and on a technology of an uplink being used” and “update circuitry configured to add the fabric-adjusted meter modifier to a meter corresponding to the specific COS group.” (Claim 9).

Again, under the analysis required by *Graham v. John Deere*, 383 U.S. 1 (1966) to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. The Supreme Court has recently reaffirmed that the *Graham* factors “continue to define the inquiry that controls” obviousness rejections under § 103. *KSR Int’l v. Teleflex Inc.*, 550 U.S. \_\_\_\_ (2007). In the present case, the scope and content of the prior art, as evidenced by the “admitted prior art” and Stanwood, did not include the claimed subject matter, particularly “calculation circuitry configured to determine a fabric-adjusted meter modifier depending on a payload size of the packet and on a technology of an uplink being used” and “update circuitry configured to add the fabric-adjusted meter modifier to a meter corresponding to the specific COS group.” (Claim 9).

The differences between the cited prior art and the claimed subject matter are significant because the addition of the fabric-adjusted meter modifier to the meter corresponding to the COS group results in an updated meter value that is a more accurate reflection of the actual bandwidth resources used in forwarding packets for the COS group. (*Appellant’s specification*, p. 5, lines 25-29; p. 7, line 25 to p. 8, line 29). The increased accuracy is due to the meter modifier accounting more accurately for the overhead associated with the technology of the limiting link fabric. (*Id.*). Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 9 under 35 U.S.C. § 103 and *Graham*.

For at least these reasons, the rejection of claim 9 and its dependent claims should not be sustained.

Claim 15:

Claim 15 recites:

A system for routing traffic from a plurality of sources using class of service (COS) meters, the system comprising:

means for receiving a packet that is placed into a specific COS group pertaining to a specific service being tracked and controlled;

means for *determining a fabric-adjusted meter modifier depending on a payload size of the packet and on a technology of an uplink being used*;

means for *adding the fabric-adjusted meter modifier to a COS meter corresponding to the specific COS group*, wherein said meter comprises a counter that tracks traffic associated with said service over a period of time, and wherein said adding updates said meter.

(Emphasis added).

In contrast, the prior art of record fails to teach or suggest the system of claim 15.

Specifically, as amply demonstrated above, the admitted prior art and Stanwood fail to teach or suggest “means for determining a fabric-adjusted meter modifier depending on a payload size of the packet and on a technology of an uplink being used” and “means for adding the fabric-adjusted meter modifier to a meter corresponding to the specific COS group.” (Claim 15).

Again, under the analysis required by *Graham v. John Deere*, 383 U.S. 1 (1966) to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. The Supreme Court has recently reaffirmed that the *Graham* factors “continue to define the inquiry that controls” obviousness rejections under § 103. *KSR Int’l v. Teleflex Inc.*, 550 U.S. \_\_\_\_ (2007). In the present case, the scope and content of the prior art, as evidenced by the “admitted prior art” and Stanwood, did not

include the claimed subject matter, particularly “means for determining a fabric-adjusted meter modifier depending on a payload size of the packet and on a technology of an uplink being used” and “means for adding the fabric-adjusted meter modifier to a meter corresponding to the specific COS group.” (Claim 15).

The differences between the cited prior art and the claimed subject matter are significant because the addition of the fabric-adjusted meter modifier to the meter corresponding to the COS group results in an updated meter value that is a more accurate reflection of the actual bandwidth resources used in forwarding packets for the COS group. (*Appellant’s specification*, p. 5, lines 25-29; p. 7, line 25 to p. 8, line 29). The increased accuracy is due to the meter modifier accounting more accurately for the overhead associated with the technology of the limiting link fabric. (*Id.*). Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 15 under 35 U.S.C. § 103 and *Graham*. For at least these reasons, the rejection of claim 15 and its dependent claims should not be sustained.

Claim 16:

Claim 16 recites:

A method of implementing class of service (COS) functionality in a telecommunications system, the method comprising:  
defining a user-configurable function by way of a user interface; and  
assigning the user-configurable function to be a *meter modifier function associated with a class of service group in the system, wherein the meter modifier function depends on a payload size of a packet and is used to adjust for a fabric uplink technology,*  
*adding the meter modifier function to a group meter, wherein said adding updates the group meter.*  
(Emphasis added).

In contrast, the prior art of record fails to teach or suggest the method of claim 16. Specifically, as amply demonstrated above, the admitted prior art and Stanwood fail to teach or suggest “a meter modifier function associated with a class of service group in the system, wherein the meter modifier function depends on a payload size of a packet and is used to adjust for a fabric uplink technology;” and “adding the meter modifier function to a group meter.” (Claim 16).

Again, under the analysis required by *Graham v. John Deere*, 383 U.S. 1 (1966) to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. The Supreme Court has recently reaffirmed that the *Graham* factors “continue to define the inquiry that controls” obviousness rejections under § 103. *KSR Int’l v. Teleflex Inc.*, 550 U.S. \_\_\_\_ (2007). In the present case, the scope and content of the prior art, as evidenced by the “admitted prior art” and Stanwood, did not include the claimed subject matter, particularly “assigning the user-configurable function to be a meter modifier function associated with a class of service group in the system, wherein the meter modifier function depends on a payload size of a packet and is used to adjust for a fabric uplink technology;” and “adding the meter modifier function to a group meter.” (Claim 16).

The differences between the cited prior art and the claimed subject matter are significant because the addition of the fabric-adjusted meter modifier to the meter corresponding to the COS group results in an updated meter value that is a more accurate reflection of the actual bandwidth resources used in forwarding packets for the COS group. (*Appellant’s specification*, p. 5, lines 25-29; p. 7, line 25 to p. 8, line 29). The increased accuracy is due to the meter modifier accounting more accurately for the overhead associated

with the technology of the limiting link fabric. (*Id.*). Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 16 under 35 U.S.C. § 103 and *Graham*. For at least these reasons, the rejection of claim 16 and its dependent claims should not be sustained.

Claim 21:

Claim 21 recites:

A method of implementing class of service (COS) functionality in a telecommunications system, the method comprising:  
*defining multiple user-configurable meter modifier functions by way of a user interface*, said meter modifier functions to be added to meters to update said meters;  
and  
assigning each service class of a set of service classes to one of the user-configurable meter modifier functions, *wherein the meter modifier functions are dependent upon packet payload size and which type of fabric-uplink technology is used*.

(Emphasis added).

In contrast, the prior art of record fails to teach or suggest the method of claim 21. Specifically, as amply demonstrated above, the admitted prior art and Stanwood fail to teach or suggest “defining multiple user-configurable meter modifier functions by way of a user interface” and “wherein the meter modifier functions are dependent upon packet payload size and which type of fabric-uplink technology is used.” (Claim 21).

Again, under the analysis required by *Graham v. John Deere*, 383 U.S. 1 (1966) to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art. The Supreme Court has recently reaffirmed that the *Graham* factors “continue to define the inquiry that controls” obviousness rejections

under § 103. *KSR Int'l v. Teleflex Inc.*, 550 U.S. \_\_\_\_ (2007). In the present case, the scope and content of the prior art, as evidenced by the “admitted prior art” and Stanwood, did not include the claimed subject matter, particularly “defining multiple user-configurable meter modifier functions by way of a user interface” and “wherein the meter modifier functions are dependent upon packet payload size and which type of fabric-uplink technology is used.” (Claim 21).

The differences between the cited prior art and the claimed subject matter are significant because the addition of the fabric-adjusted meter modifier to the meter corresponding to the COS group results in an updated meter value that is a more accurate reflection of the actual bandwidth resources used in forwarding packets for the COS group. (*Appellant's specification*, p. 5, lines 25-29; p. 7, line 25 to p. 8, line 29). The increased accuracy is due to the meter modifier accounting more accurately for the overhead associated with the technology of the limiting link fabric. (*Id.*). Thus, the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 21 under 35 U.S.C. § 103 and *Graham*. For at least these reasons, the rejection of claim 21 and its dependent claims should not be sustained.

(3) Claims 6 and 13 are patentable over the admitted prior art, Stanwood, and Lee:

Claims 6 and 13 are dependent on independent claims 1 and 9, respectively, and are patentable for at least the same reasons given above in favor of the patentability of claims 1 and 9. For at least this reason alone, the rejection of claims 6 and 13 should not be sustained. Additionally, claims 6 and 13 are further patentable over the cited prior art for the following reasons.

Claim 6 recites “wherein determining the fabric-adjusted meter modifier comprises retrieving a modifier value associated with the payload size from a technology-specific look-up table.” Claim 13 recites “wherein the calculation circuitry comprises a technology-specific look up table.” The final Action asserts that Lee “disclosed the feature wherein determining the fabric-adjusted meter modifier comprises retrieving a modifier value associated with the payload size from a technology-specific look-up table.” (Action, p. 9) (citing to Lee, ¶ 0085). Appellant notes that Lee does not teach or suggest in the cited portion or any other portion a lookup table taught at all. Moreover, Lee does not teach or suggest any type of meter modifier. Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness for claims 6 and 13. Consequently, for at least these additional reasons, the rejection of claims 6 and 13 should not be sustained.

(4) Claim 14 is patentable over the admitted prior art, Stanwood, and Norrell:

Claim 14 is dependent on independent claim 9. Therefore, claim 14 is patentable over the cited prior art for at least the same reasons given above in favor of the patentability of claim 9. Moreover, Appellant notes that Norrell does not remedy the deficiencies of the admitted prior art and Stanwood given above. Consequently, the rejection of claim 14 should not be sustained.

(5) Claim 18 is patentable over the admitted prior art, Stanwood, and Hao:

Claim 18 is dependent on independent claim 16, and is patentable over the prior art of record for at least the same reasons given above in favor of the patentability of claim 16. For at least this reason alone, the rejection of claim 18 should not be sustained. Claim 18 also recites subject matter that is further patentable over the prior art.



Claim 18 recites “wherein the user-configurable function depends on a current value of the meter.” The Office Action asserts that Hao’s teaching of a system “monitoring the current traffic pattern of the flow of the data packets to predict the future data flow for each chip” teaches the subject matter of claim 18. (Action, p. 10) (citing to Hao, ¶ 0026).

Appellant notes that the system taught by Hao is automatic, and not a user-configurable function. (Hao, ¶ 0026). Moreover, while Hao is directed to monitoring the flow of data packets, Hao teaches nothing regarding a “current value of the meter.” (Claim 18). Rather, Hao focuses on “the current traffic pattern,” which is not necessarily a meter value. Accordingly, the Office Action has yet again failed to establish a *prima facie* case of obviousness. Consequently, for at least this additional reason, the rejection of claim 18 should not be sustained.

(6) Claim 19 is patentable over the admitted prior art, Stanwood, and Katayama:

Claim 19 is dependent on claim 16 and is patentable over the prior art of record for at least the same reasons given above in favor of the patentability of claim 16. For at least this reason alone, the rejection of claim 19 should not be sustained. Claim 19 also recites subject matter that is further patentable over the prior art.

Claim 19 recites “wherein the user-configurable function depends on a last destination of a packet forwarded by the system.” In response, the Office Action cites to Katayama’s teaching of output queues formed as “address tables containing ‘next read address’ indicating which data block to read next, together with ‘last read address’ indicating where the last data block is.” (Katayama, ¶ 0013).

Appellant notes that the output queues taught by Katayama have nothing to do with a “user-configurable function” as recited in claim 19. Moreover, the portion of Katayama cited

to by the Examiner does not teach or suggest a “last destination of a packet forwarded by the system.” (Claim 19). Rather, it merely references the physical address in data storage medium corresponding to the last block of data read from a queue. It is disappointing that the Examiner has yet again failed to exert the effort necessary to understand the subject matter of the claims. Because Katayama fails to teach or suggest this subject matter, no *prima facie* case of obviousness has been established with regard to claim 19. Consequently, for at least these additional reasons, the rejection of claim 19 should not be sustained.

(7) Claims 22-24 are patentable over the admitted prior art, Stanwood, and Valvo:

Claims 22-24 are dependent on claim 1 and are patentable over the prior art of record for at least the same reasons given above in favor of the patentability of claim 1. For at least this reason alone, the rejection of claims 22-24 should not be sustained. Claims 22-24 also recite subject matter that is further patentable over the prior art.

Claim 22 recites “wherein the fabric-adjusted meter modifier is different for hardware-based and software-based routing.” Claim 23 recites “wherein the fabric-adjusted meter modifier is different for tagged and untagged hardware-based routing.” Claim 24 recites “wherein the fabric-adjusted meter modifier is different for hardware based routing to an Ethernet link and hardware-based routing to a Synchronous Optical NETWORK (SONET) link.”

With regard to each of these claims, the final Action cites to the same portion of Valvo, asserting that Valvo teaches the additionally claimed subject matter. (Action, p. 11) (citing to Valvo, col. 1, lines 60-67). Appellant notes that this portion of Valvo merely acknowledges the existence of routing packets through SONET and Ethernet networks. Valvo utterly fails to teach or suggest anything having to do with a “fabric-based meter

modifier,” especially such a modifier that is different for different types of networks.

Accordingly, the Office Action has yet again completely failed to establish a *prima facie* case of obviousness with respect to claims 22-24. Consequently, the rejection of claims 22-24 should not be sustained for at least these additional reasons

In view of the foregoing, it is submitted that the final rejection of the pending claims is improper and should not be sustained. Therefore, a reversal of the Rejection of March 12, 2009 is respectfully requested.

Respectfully submitted,

DATE: June 12, 2009

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### **VIII. CLAIMS APPENDIX**

1. (previously presented) A method of assigning service priorities to traffic from a plurality of sources using meters, the method comprising:

receiving a packet that is placed into a specific class of service (COS) group pertaining to a specific service being tracked and controlled;

determining a fabric-adjusted meter modifier depending on a payload size of the packet and on technology of a limiting uplink being used; and

adding the fabric-adjusted meter modifier to a meter corresponding to the specific COS group, wherein the meter comprises a counter that tracks traffic associated with said service over a period of time, and wherein said adding updates the meter.

2. (cancelled)

3. (original) The method of claim 1, further comprising:  
determining if the meter exceeds a black-type limit for the specific COS group; and  
if the black-type limit is exceeded, then dropping the packet.

4. (original) The method of claim 1, further comprising:  
determining if the meter exceeds a red-type limit for the specific COS group; and  
if the red-type limit is exceeded, then lowering a priority level of the packet.

5. (previously presented) The method of claim 1, further comprising:  
determining if the COS meter exceeds a limit for the specific COS group and  
if the limit is exceeded then perform an action specified for the limit.

6. (original) The method of claim 2, wherein determining the fabric-adjusted meter modifier comprises retrieving a modifier value associated with the payload size from a technology-specific look-up table.

7-8. (cancelled)

9. (previously presented) An apparatus for forwarding traffic from a plurality of sources, the apparatus comprising:

a port for receiving a packet that is placed into a specific COS group pertaining to a specific service being tracked and controlled;

calculation circuitry configured to determine a fabric-adjusted meter modifier depending on a payload size of the packet and on a technology of an uplink being used;

update circuitry configured to add the fabric-adjusted meter modifier to a meter corresponding to the specific COS group, wherein said meter comprises a counter that tracks traffic associated with said service over a period of time.

10. (original) The apparatus of claim 9, wherein the fabric-adjusted meter modifier is also dependent on a payload size of the packet.

11. (original) The apparatus of claim 9, further comprising:  
comparison circuitry configured to determine if the meter exceeds a black-type limit for the specific COS group; and  
non-forwarding circuitry for dropping the packet if the black-type limit is exceeded.

12. (original) The apparatus of claim 9, further comprising:  
comparison circuitry configured to determine if the meter exceeds a red-type limit for the specific COS group; and  
prioritization circuitry for lowering a priority level of the packet if the red-type limit is exceeded.

13. (previously presented) The apparatus of claim 9, wherein the calculation circuitry comprises a technology-specific look-up table.

14. (previously presented) The apparatus of claim 9, wherein the calculation circuitry comprises a plurality of comparators and an adder to sum outputs of the comparators.

15. (previously presented) A system for routing traffic from a plurality of sources using class of service (COS) meters, the system comprising:

means for receiving a packet that is placed into a specific COS group pertaining to a specific service being tracked and controlled;

means for determining a fabric-adjusted meter modifier depending on a payload size of the packet and on a technology of an uplink being used;

means for adding the fabric-adjusted meter modifier to a COS meter corresponding to the specific COS group, wherein said meter comprises a counter that tracks traffic associated with said service over a period of time, and wherein said adding updates said meter.

16. (previously presented) A method of implementing class of service (COS) functionality in a telecommunications system, the method comprising:

defining a user-configurable function by way of a user interface; and

assigning the user-configurable function to be a meter modifier function associated with a class of service group in the system, wherein the meter modifier function depends on a payload size of a packet and is used to adjust for a fabric uplink technology,

adding the meter modifier function to a group meter, wherein said adding updates the group meter.

17. (cancelled)

18. (original) The method of claim 16, wherein the user-configurable function depends on a current value of the meter.

19. (original) The method of claim 16, wherein the user-configurable function depends on a last destination of a packet forwarded by the system.

20. (cancelled)

21. (previously presented) A method of implementing class of service (COS) functionality in a telecommunications system, the method comprising:

defining multiple user-configurable meter modifier functions by way of a user interface, said meter modifier functions to be added to meters to update said meters; and

assigning each service class of a set of service classes to one of the user-configurable meter modifier functions, wherein the meter modifier functions are dependent upon packet payload size and which type of fabric-uplink technology is used.

22. (previously presented) The method of claim 1, wherein the fabric-adjusted meter modifier is different for hardware-based and software-based routing.

23. (previously presented) The method of claim 22, wherein the fabric-adjusted meter modifier is different for tagged and untagged hardware-based routing.

24. (previously presented) The method of claim 22, wherein the fabric-adjusted meter modifier is different for hardware-based routing to an Ethernet link and hardware-based routing to a Synchronous Optical NETWORK (SONET) link.

25. (previously presented) The method of claim 1, wherein the fabric-adjusted meter modifier is also dependent on a payload size of the packet.

26. (previously presented) The method of claim 25, wherein determining the fabric-adjusted meter modifier comprises summing outputs from a plurality of comparators with the payload size if specified by a user-configurable flag.

**IX. Evidence Appendix**

None



**X. Related Proceedings Appendix**

None